

**Amendments to the Specification:**

Please amend the paragraph on page 6, lines 18-23, as follows:

In the invention, typically, curves of (particularly meridional) curvature of field of a lens having a lens length of about  $P/2$  (in which  $P$  is a pitch indicating the length of a paraxial snaking period in the lens) ~~are~~ is measured so that index distribution coefficients of the lens are calculated back software-wise ~~softwarewise~~ to be fitted to the curve.

Please amend the paragraph bridging pages 6 and 7, beginning on page 6, at line 24, as follows:

As shown in Fig. 1, when an images is formed between opposite end surfaces of a  $P/2$  rod lens, an object surface and an image surface are located to be symmetric with respect to the rod lens. Accordingly, there is neither chromatic ~~chromatic~~ aberration nor distortion caused by asymmetry, so that the image has no aberration but spherical aberration and (sagital and meridonal) curvature of field. Hence the curvature of field can be measured accurately if the spherical aberration of the lens is not extremely large.

Please amend the one sentence paragraph on page 12, line 5, as follows:

The first step, S1, is (Preparation for Measurement.)

Please amend the one sentence paragraph on page 12, line 15, as follows:

The second step, S2, is (Measurement of ~~Field~~ Curvature of Field.)

Please amend the one sentence paragraph on page 12, line 24, as follows:

The third step, S3, is (Setting of Initial Parameter with Design Software.)

Please amend the one sentence paragraph on page 13, line 14, as follows:

The fourth step, S4, is (Accurate Determination of  $g$  Value.)

Please amend the one sentence paragraph on page 13, line 17, as follows:

The fifth step, S5, is (Setting of Object Height and Meridonal Focal Point Position.)

Please amend the one sentence paragraph on page 13, line 25, as follows:

The sixth step, S6, is (Definition of Optimizing Function.)

Please amend the one sentence paragraph on page 14, line 8, as follows:

The seventh step, S7, is ( Optimizing Calculation.)

Please amend the Abstract on page 21 of the application to read as follows:

~~In a~~ A method of measuring a radial ~~gradient~~ index distribution of a rod lens ~~has the steps: by calculating higher order index distribution coefficients indicating the gradient index distribution,~~ (1) the rod lens is processed so that the optic-axial length ~~of the rod lens~~ is approximately equal to  $P/2$  ~~(in which P represents a paraxial period length (pitch))~~ (where P is pitch length) or approximately equal to an integer multiple thereof of  $P/2$  and so ~~that opposite end surfaces of the rod lens are shaped like parallel planes,~~ (2) a patterned surface is set as an object surface in the proximity of one end surface ~~of the rod lens~~, and an image surface is formed in the proximity of the other end surface ~~of the rod lens~~ by irradiating the patterned surface with condensed monochromatic light, (3) the positions of paraxial focal points and the curves of curvature of field are obtained by observing the image surface, and (4) higher-order index distribution coefficients are calculated back by a fitting process on the basis of the positions of paraxial focal points and the curves of curvature of field ~~(Fig. 4).~~